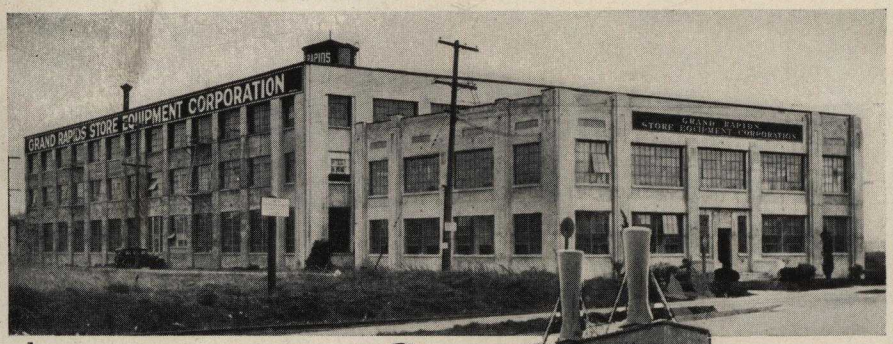
A.I.A. File No. 16e

# TRUSCON STEEL WINDOWS

## COMMERCIAL PROJECTED TYPE

# *Typical Installations of Truscon Commercial Projected Steel Windows*




1

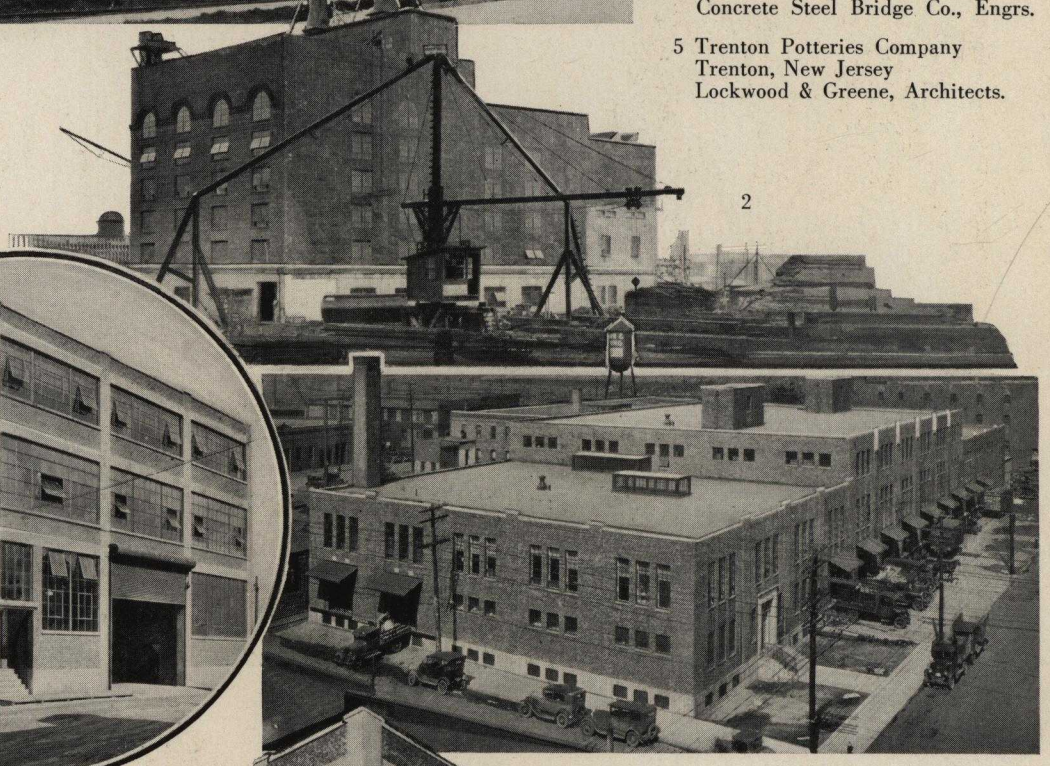
1 Grand Rapids Store Equipment Co.
Portland, Oregon
Sutton & Whitney, Architects.

2 Municipal Steam Plant No. 2
Tacoma, Washington

3 Grocers Wholesale Warehouse
Des Moines, Iowa
Proudfoot, Rawson, Souers & Thomas, Architects.

4 Hackmeister-Lind Company
McKees Rocks, Pennsylvania
Concrete Steel Bridge Co., Engrs.

5 Trenton Potteries Company
Trenton, New Jersey
Lockwood & Greene, Architects.



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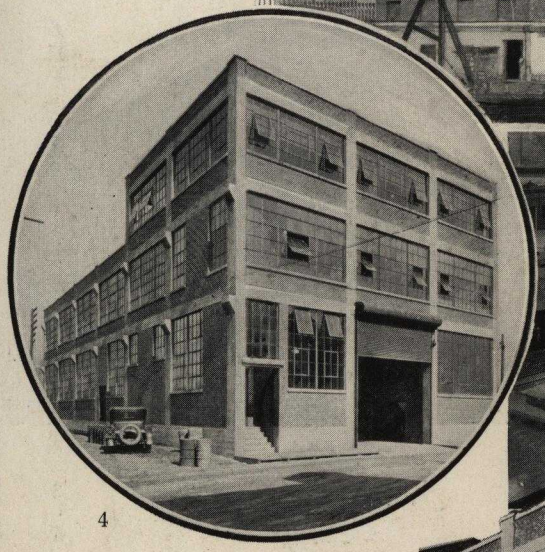

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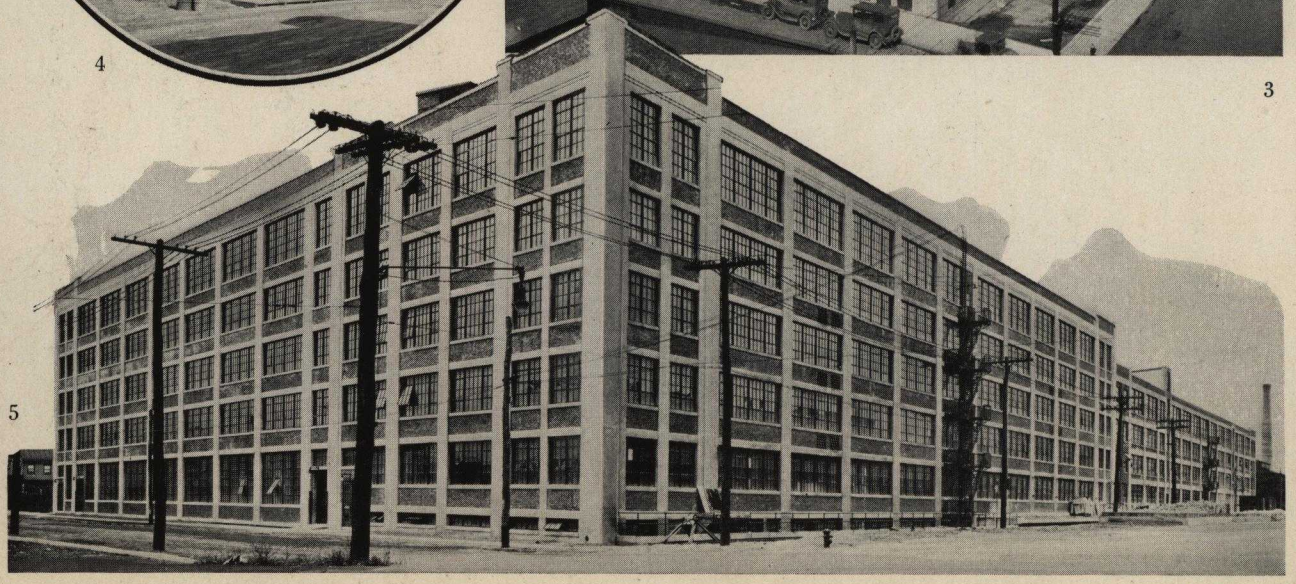

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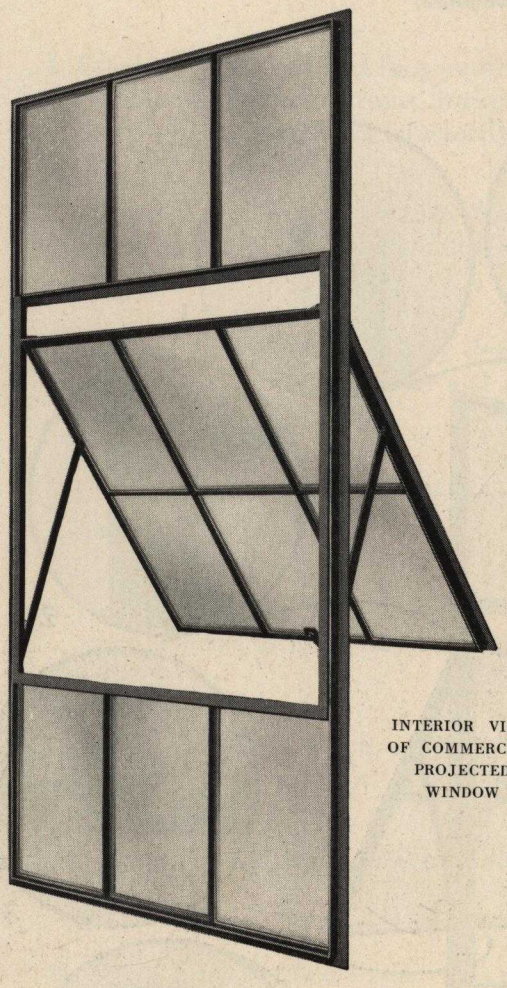
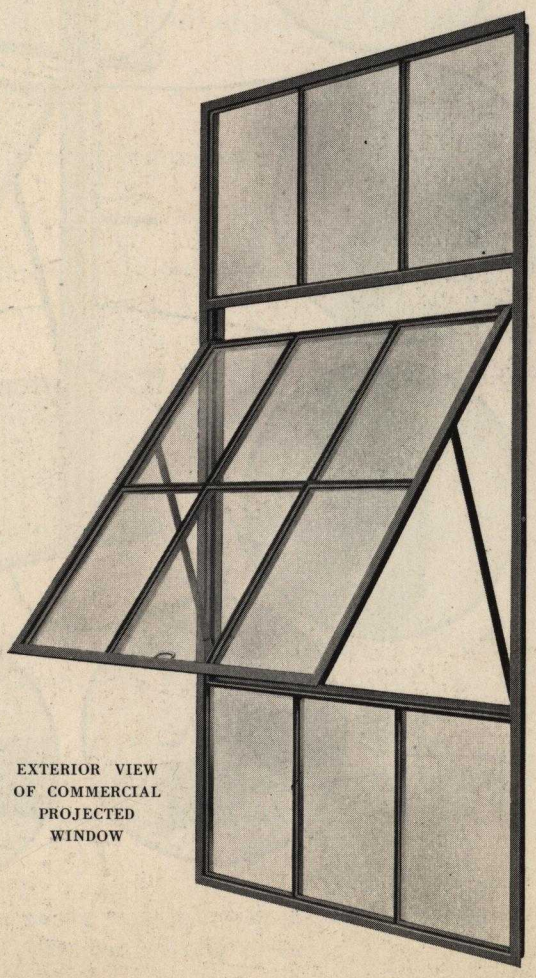
# *Commercial Type*



INTERIOR VIEW OF COMMERCIAL PROJECTED WINDOW

WHERE plain design and economy are the keynote of the construction, Truscon Commercial Projected Windows should be specified in place of the Architectural type. While the essential features of each are identical, the Commercial type can be furnished at lower prices, as a result of standardization and volume production. On account of the fact that glass for the Commercial type of Projected Windows is the same as that used in Truscon Pivoted Steel Windows, Commercial Projected Windows can be used in the office section of an industrial plant with complete conformity to the general external design. These windows are also used in buildings such as schools, garages, filling stations, printing shops, warehouses, etc.



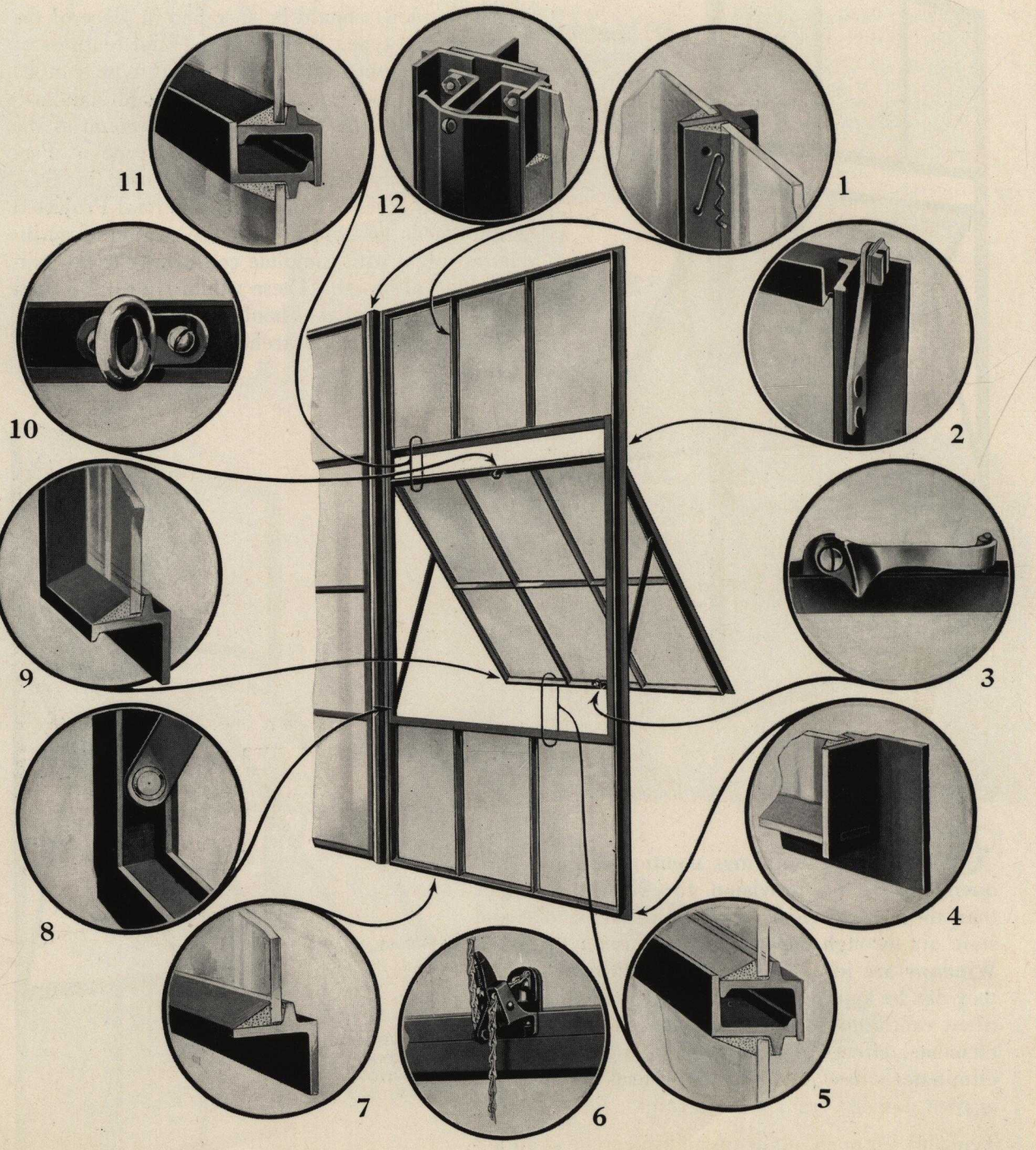
EXTERIOR VIEW OF COMMERCIAL PROJECTED WINDOW

THE class of buildings mentioned above, frequently have no provision for ventilation other than the natural clearing off of vapor, smoke and stale air through the windows. Truscon Projected Windows are ideal under such conditions, because they can be kept open in all kinds of weather. The tilted ventilator, while acting as a deflector of the elements, effects a continuous change of air. It eliminates direct drafts and protects the interior against damage from driving rains.

Types which open out or up and in can be supplied with The National Board of Fire Underwriters' Label.

# *Construction Features*

***(Described on opposite page)***



# *Construction Features*

***(Illustrated on opposite page)***

1 Glazing. Glass bed and face puttied and held in place with clips; staggered holes and flexible clips allow various thicknesses of glass. Use steel window putty. Ordinary putty will not harden satisfactorily.

2 Forged Brass Sliding Friction Shoe. Shoe mounted on flat heavy type tension spring which is securely riveted to stiles of vent, assuring proper friction at all times.

3 Locking Handle. Artistically designed handle and strike plate of malleable iron sherardized are properly placed and are to be securely fastened to sash members. (Bronze at slight additional cost).

4 Corner Construction. Heavy frame angle members are mortised, tenoned, and air hammered.

5 New Weathering Section at Sill. Weathertightness through sill at ventilator is assured when window is closed by large double contact at this point.

6 Automatic Chain Latch. Automatic kick-out allows operation by chain of ventilator out of reach from floor.

7 Frame. Heavy angle section at head, sill and jambs, mortised, tenoned and air hammered.

8 Heavy Brass Bushed Pivot. $\frac{3}{16}''$ x 1″ supporting arms for ventilator are concealed when ventilator is closed. They are properly fastened to insure easy and accurate operation.

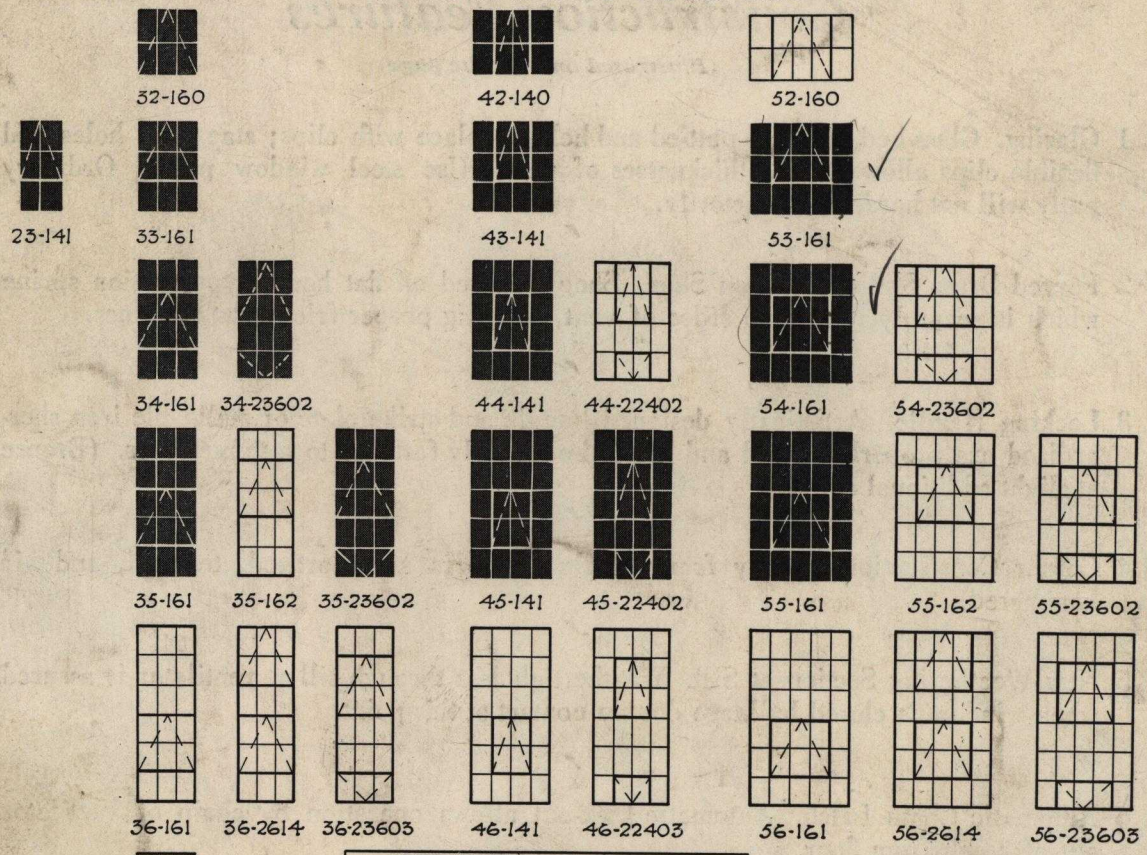
9 Ventilator Frame Corner. Heavy, rigid angle section, mortised and tenoned and air hammer riveted.

10 Pole Hook Ring. To be used in conjunction with cam handle for operation of out-swing ventilators, when out of reach from the floor, with window pole.

11 New Weathering Section at Head. Head of out-swing ventilator provides double contact at two points and will provide proper weathering the same as the sill section.

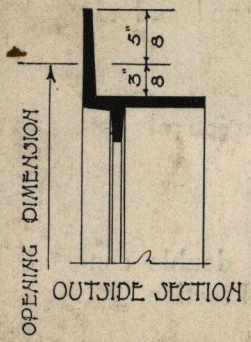
12 Vertical Mullion. Exterior Tee Bar to give necessary rigidity, with pressed metal cover on the inside to give pleasing appearance. (Mullion covers extra).

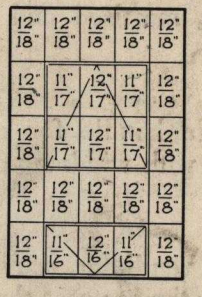
## 14" x 20" AND 12" x 18" GLASS SIZE

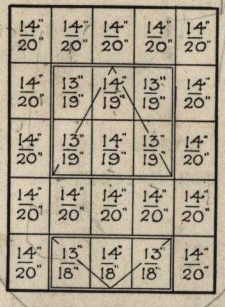



| OPENING DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| LIGHTS WIDE | GLASS WIDTH 12" | GLASS WIDTH 14" | LIGHTS HIGH | GLASS HEIGHT 18" | GLASS HEIGHT 20" |
| 2 | 2'-1 5/8" | 2-5 5/8 | 2 | 3'-1 5/8" | 3'-5 5/8" |
| 3 | 3'-2" | 3-8 | 3 | 4'-8" | 5'-2 |
| 4 | 4'-2 3/8" | 4-10 3/8 | 4 | 6'-2 3/8" | 6'-10 3/8" |
| 5 | 5'-2 3/4" | 6'-0 3/4 | 5 | 7'-8 3/4" | 8'-6 3/4" |
| | | | 6 | 9'-3 1/8" | 10'-3 1/8" |
| | | | 7 | 10'-9 1/2" | 11'-11 1/2" |

· USE · STANDARD · TYPES · & SIZES · WHENEVER · POSSIBLE ·



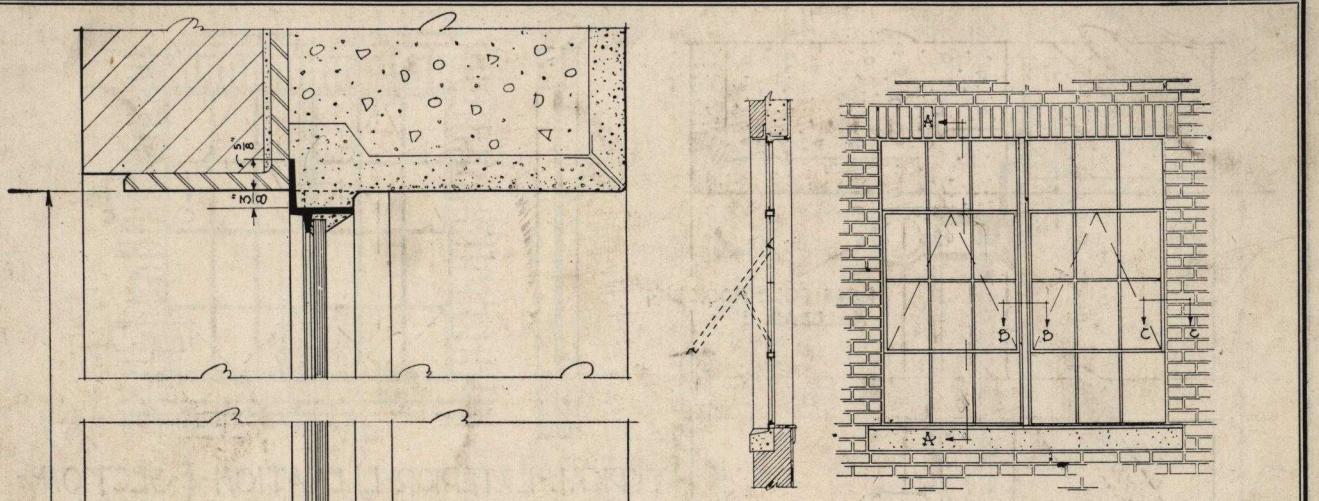




GLASS SIZES FOR STANDARD COMMERCIAL PROJECTED WINDOWS

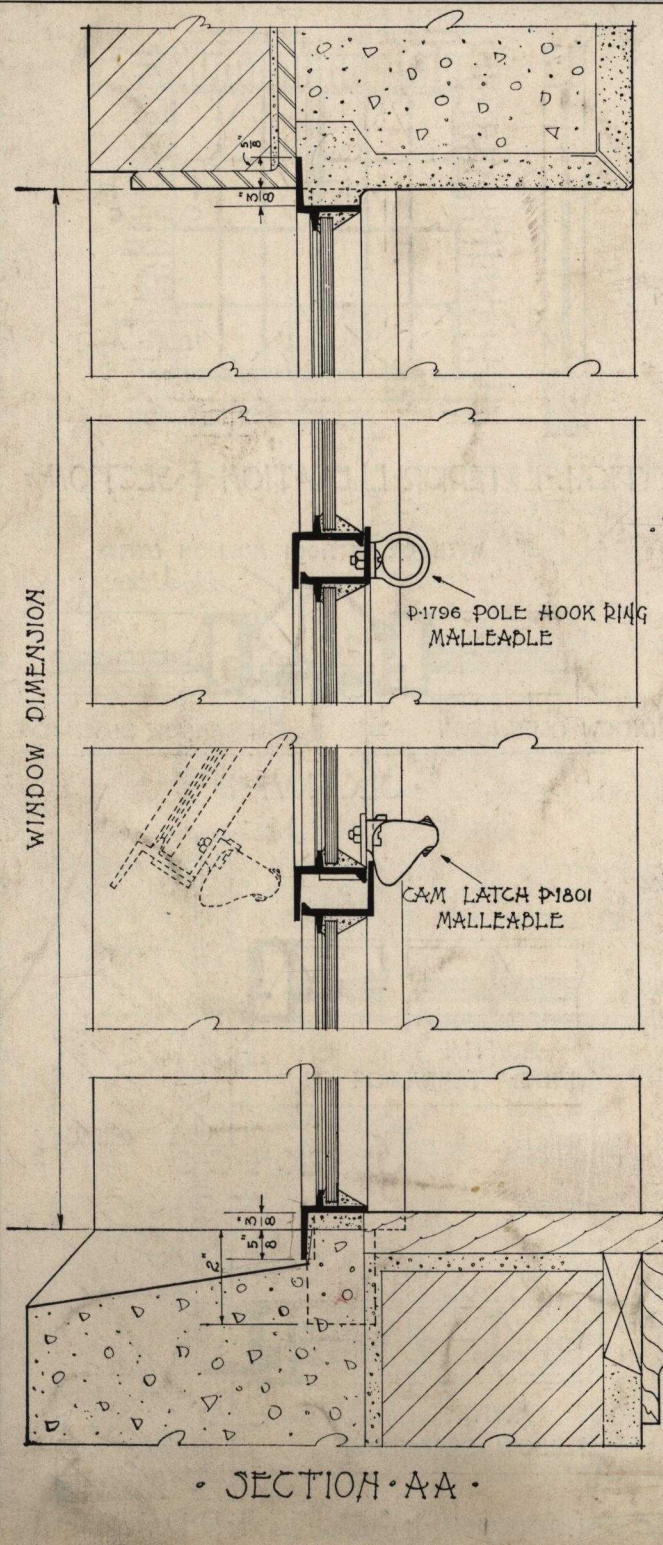
NOTE: STOCK UNITS INDICATED BY WINDOWS WITH SOLID BACKGROUND ARE DELIVERED IMMEDIATELY FROM OUR WAREHOUSES.

14" x 20" AND 12" x 18" GLASS SIZES OCCUR ONLY IN STATIONARY PART OF WINDOW. GLASS IN ALL VENTILATORS TO BE CUT AS SHOWN.

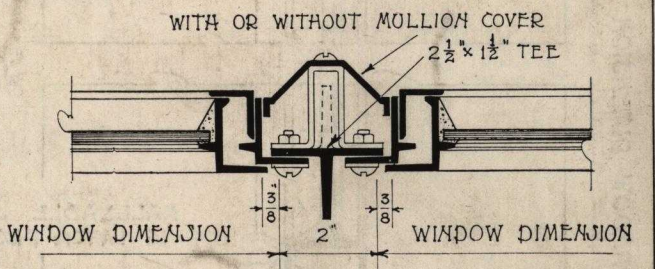
VENTILATORS ARE INDICATED BY CROSSED DASHED LINES.
ALL VENTILATORS MAY BE FURNISHED TO PROJECT DOWN AND OUT OR UP AND IN, EXCEPT ONE LIGHT HIGH VENTS WHICH PROJECT UP AND IN ONLY.



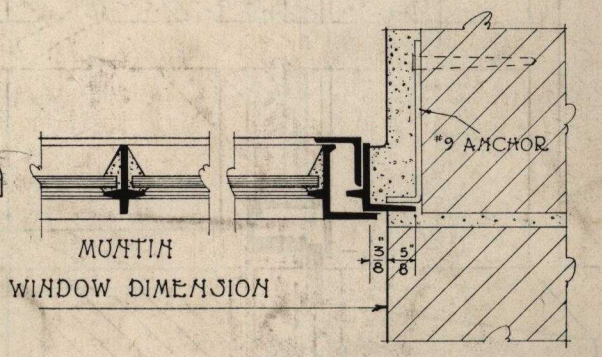

· TYPICAL · EXTERIOR · ELEVATION · & · SECTION ·




· SECTION · AA ·



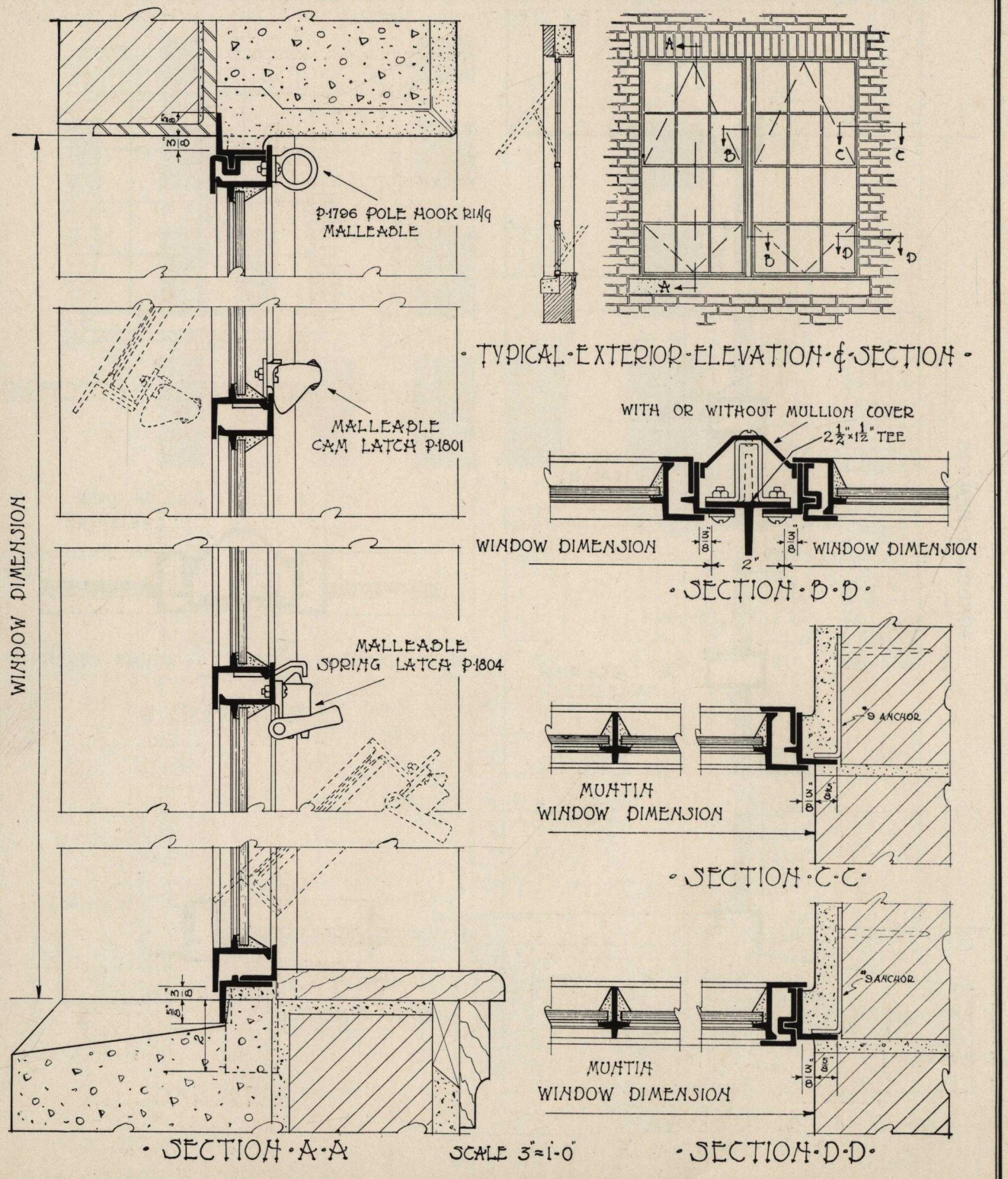

· SECTION · B · B ·



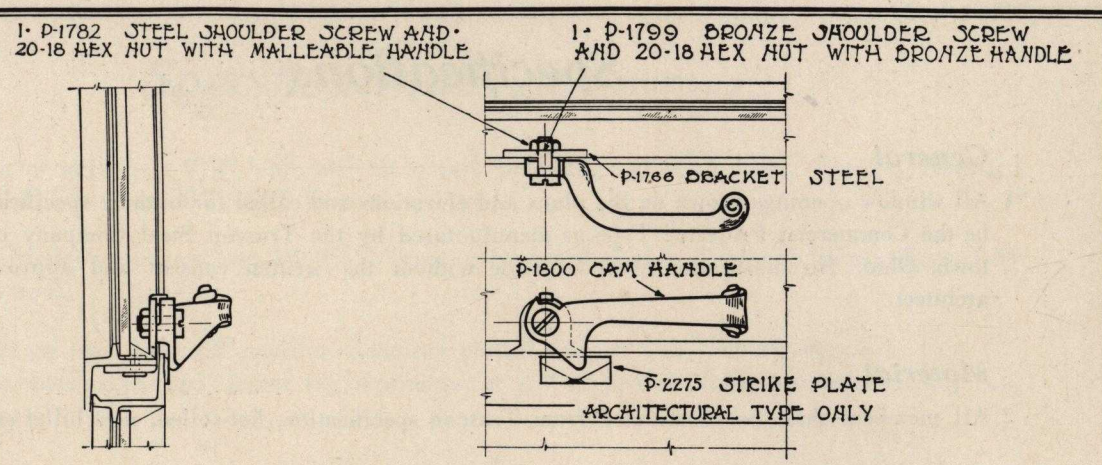

· SECTION · CC ·

· SCALE · 3" = 1 · 0"

| TRUSCON STEEL COMPANY Youngstown, Ohio | COMMERCIAL TYPE « « VENTILATOR TO OPEN OUT **PROJECTED STEEL WINDOWS** | PLATE No. **B-2** FEBRUARY, 1930 |
|---|---|---|

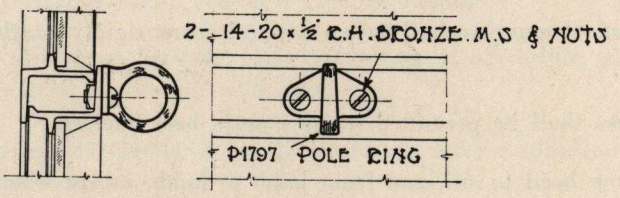



| TRUSCON STEEL COMPANY Youngstown, Ohio | COMMERCIAL TYPE « « UPPER VENT OPENS OUT » » LOWER VENT OPENS IN **PROJECTED STEEL WINDOWS** | PLATE No. **B-3** DECEMBER, 1930 |
|---|---|---|


1- P-1782 STEEL SHOULDER SCREW AND 20-18 HEX NUT WITH MALLEABLE HANDLE
1- P-1799 BRONZE SHOULDER SCREW AND 20-18 HEX NUT WITH BRONZE HANDLE
P-1766 BRACKET STEEL
P-1800 CAM HANDLE
P-2275 STRIKE PLATE
ARCHITECTURAL TYPE ONLY

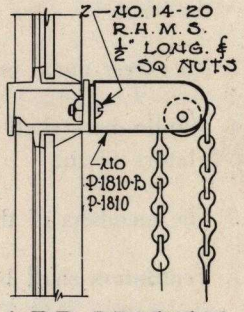
## - CAM-HANDLE -

VENTILATORS PROJECTED OUT
BRONZE STANDARD FOR ARCHITECTURAL TYPE P-1800
MALLEABLE IRON STANDARD FOR COMMERCIAL TYPE P-1801



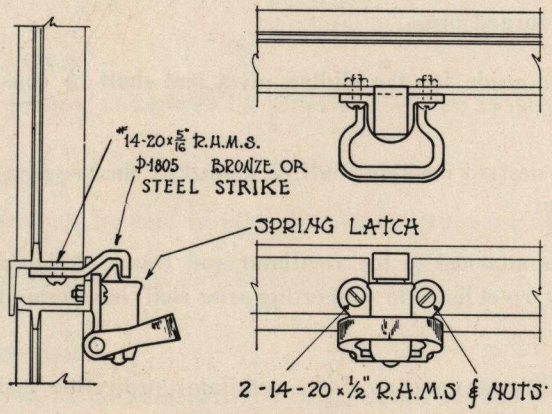

## - POLE HOOK RING -

ATTACHED AT HEAD OF PROJECTED OUT VENTILATOR
BRONZE STANDARD FOR ARCHITECTURAL TYPE P-1797
MALLEABLE IRON STANDARD FOR COMMERCIAL TYPE P-1796



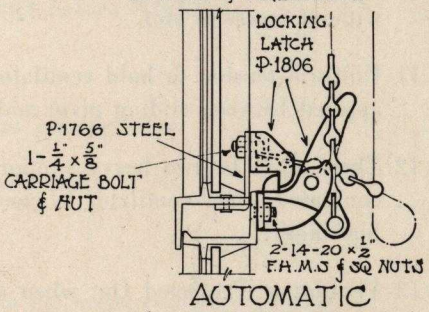

## ROLLER BRACKET

2" BRACKET USED ONLY WITH AUTOMATIC LOCKING LATCH SHOWN BELOW.
BRONZE & MALLEABLE




## - SPRING LATCH -

BRONZE STANDARD FOR ARCHITECTURAL TYPE P-1804-B
MALLEABLE IRON STANDARD FOR COMMERCIAL TYPE P-1804




## AUTOMATIC LOCKING LATCH.

USED WITH PROJECTED VENTILATORS OPENING OUT AND NOT WITHIN REACH OF FLOOR.
BRONZE (P-1806-B) MALLEABLE (P-1806)

SCALE 3"=1'-0"

NOTE:- ALL MALLEABLE OR IRON HARDWARE IS CADMIUM PLATED.

# *Specifications*

## *General*

1 All window openings shown on the plans and elevations and called for in these specifications shall be the Commercial Projected Type as manufactured by the Truscon Steel Company of Youngstown, Ohio. No substitution shall be made without the written consent and approval of the architect.

## *Material*

2 All members shall be constructed from Truscon specification, hot-rolled, new billet steel.

3 All joints shall be mortise and tenon, and air-hammer riveted.

## *VENTILATORS PROJECTED OUT OR PROJECTED IN:*

### *Construction*

4 The intersection of horizontal and vertical muntins shall have a dovetail mitre, rigidly interlocking the bars.

5 No excess metal or projecting surfaces shall be permitted where muntin bars intersect.

6 Muntin bars shall be continuous, from head to sill, and from jamb to jamb, except where ventilators occur.

7 The members of the windows shall not be bent or deformed during process of manufacture.

8 Ventilators shall have double contact weathering on all four sides.

9 The sliding pivot shall be constructed of forged brass.

10 The side of the window frame shall act as a guide for the sliding pivot and shall be constructed without recess or slot.

11 Uniform tension to hold ventilator in any desired position shall be gained by the use of a spring applied between sliding pivot and ventilator.

12 There shall be two heavy supporting arms attached to the ventilator and frame, designed to be concealed when ventilator is closed. (The rivet holes in supporting arms shall have brass flanged bushings).

13 Ventilators Projected Out when open shall have no part of the ventilator projecting inside the normal plane of the window.

14 Ventilators Projected In shall not project outside the normal plane of the window.

### *Mullions*

15 Where two or more window units, less than 6′-3″ in height, are used in the same opening, they shall be connected together with Truscon Standard Plate Mullions (Type T-1).

# *Specifications* « « *Continued* » »

16 For window units over 6′-3″ high, and up to and including 10′-9½″ high, Truscon Standard T-Bar Mullions (Type T-2) shall be used.

17 For all window openings over 10′-9½″, Truscon Standard double T-Bar Mullions (Type T-3) shall be used.

18 All mullions shall have (2″ mullion distance) slotted holes to allow for adjustment.

19 Mullions shall extend 1⅜″ below leg of window at sill to provide firm anchorage in sill construction.

### *Hardware*

20 All hardware shall be malleable iron, cadmium plated, unless otherwise specified.

21 All ventilators Opening Out and within reach of the floor, shall be equipped with a malleable iron cam latch handle of standard Truscon design.

22 All ventilators Opening Out, and not easily accessible, shall be equipped with malleable iron cam latch handle and pole-hook ring.

(Truscon automatic chain operated latch may be substituted for cam latch and pole hook at additional cost.)

23 All ventilators Opening In shall be equipped with automatic spring latch.

### *Structural Support*

24 All structural work for the support of steel windows shall be provided by another contractor.

### *Painting*

25 All window units shall be given a shop coat of protective paint before shipment.

### *Glazing*

26 Glass shall be held in place by Truscon copper-clad steel wire glazing clips.

27 Glass shall be bed and face puttied with Truscon steel window putty.

### *Erection*

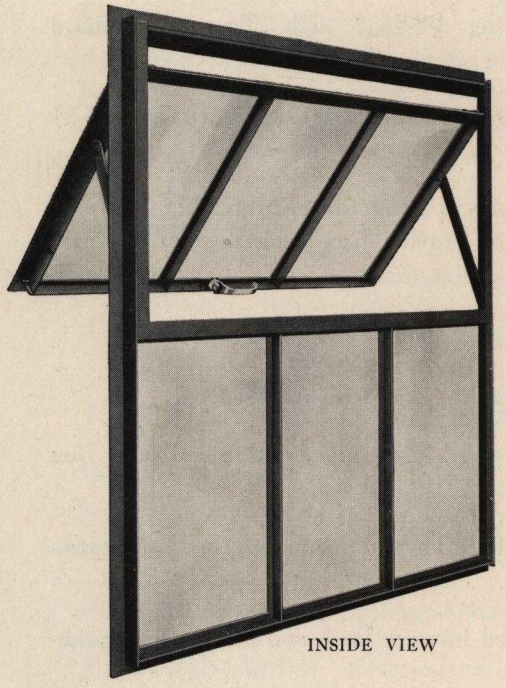
28 Window units must be trued in all directions and set plumb in the masonry before glazing.

29 In setting windows, wooden wedges to hold same in place must be located so as not to bulge or distort the unit.

30 The erection of windows shall be handled by the manufacturer of same.

31 After windows have been set in masonry and properly built in, the joint between the window frames and masonry shall be carefully pointed up by the mason contractor.

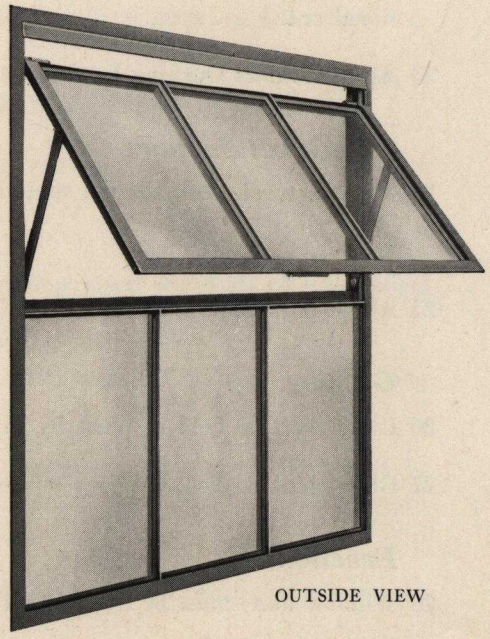
# *Utility Type*



INSIDE VIEW

TRUSCON Utility Steel Windows are ideal for use in buildings such as garages, filling stations, stores, shops, basements, area-ways, etc. The ventilator is a balance projecting type which in opening swings down and out leaving the interior entirely unobstructed. Brass friction shoes attached to the top of the ventilator and sliding in guides at the side rigidly hold the ventilator in any desired position, eliminating the use of chains and push bars; the cam latch handle is the only hardware required to open, close and lock the window.

Utility Steel Windows are furnished in only one size—3′-4″ wide by 3′-7⅝″ high. Glass size in fixed portion of sash is 13″ x 20″ in the two outside lights and 12″ x 20″ in center fixed light. The glass size of lights in the ventilator is 12″ x 20″.



OUTSIDE VIEW

### *Material*

ALL members used in the construction of Truscon Utility Steel Windows are rolled from Truscon specification billet steel.

### *Painting*

All windows are given one dip coat of protective paint before leaving the factory.

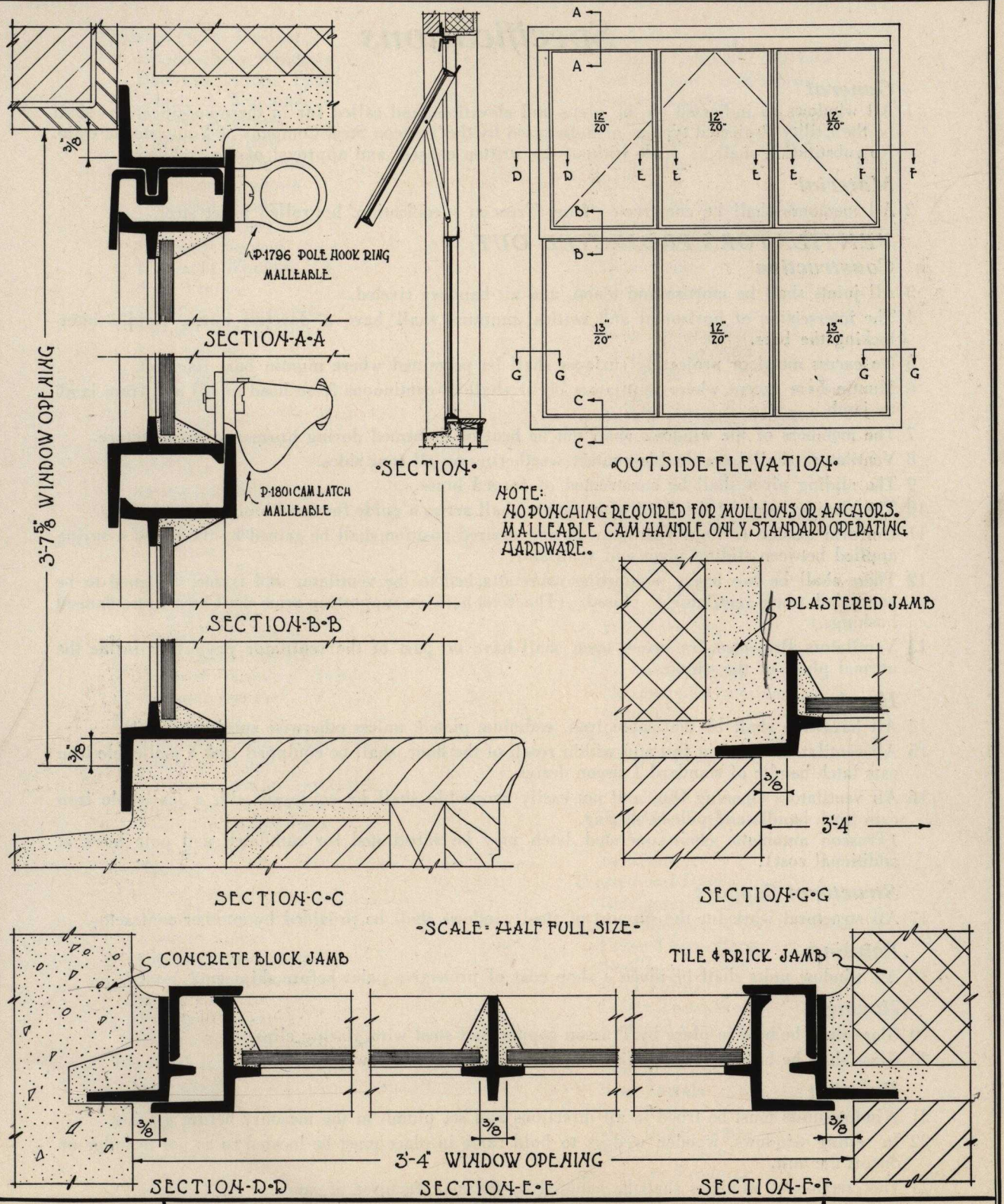
### *Hardware*

All hardware shall be malleable iron, sherardized. All ventilators opening out and within reach of floor shall be equipped with malleable iron cam latch handle of standard Truscon design.

### *Glazing*

Truscon Utility Steel Windows are glazed from the inside, each light being held in place by means of four wire glazing clips. Putty is applied in the usual way. Be sure and use steel window putty as the ordinary putty will not harden satisfactorily on steel. Glazing clips are supplied with windows but no glass or putty.

Truscon Utility Steel Windows are carried in stock for immediate shipment from Truscon Dealers and Truscon Warehouses. They are permanent, fireproof, never stick, shrink or warp, and open or close easily regardless of climatic conditions.




| TRUSCON STEEL COMPANY Youngstown, Ohio | UTILITY TYPE « « STANDARD SIZES **PROJECTED STEEL WINDOWS** | PLATE No. **B-4** DECEMBER, 1930 |
|---|---|---|

# *Specifications*

### *General*

1 All windows so indicated on the plans and elevations and called for in these specifications shall be the Utility Projected type as manufactured by the Truscon Steel Company of Youngstown, Ohio. No substitution shall be made without the written consent and approval of the architect.

### *Material*

2 All members shall be constructed from Truscon specification, hot-rolled billet steel.

### *VENTILATORS PROJECTED OUT*

### *Construction*

3 All joints shall be mortise and tenon, and air-hammer riveted.

4 The intersection of horizontal and vertical muntins shall have a dovetail mitre, rigidly interlocking the bars.

5 No excess metal or projecting surfaces shall be permitted where muntin bars intersect.

6 Muntin bars except where ventilators occur shall be continuous from head to sill and from jamb to jamb.

7 The members of the windows shall not be bent or deformed during process of manufacture.

8 Ventilators shall have double contact weathering on all four sides.

9 The sliding pivot shall be constructed of forged brass.

10 The glazing ledge of the fixed sash section shall act as a guide for the sliding pivot.

11 Uniform tension to hold ventilator in any desired position shall be gained by the use of a spring applied between sliding pivot and ventilator.

12 There shall be two heavy supporting arms attached to the ventilator and frame, designed to be concealed when ventilator is closed. (The rivet holes in supporting arms shall have brass flanged bushings.)

13 Ventilators Projected Out when open shall have no part of the ventilator projecting inside the normal plane of the window.

### *Hardware*

14 All hardware shall be malleable iron, cadmium plated, unless otherwise specified.

15 All ventilators Opening Out and within reach of the floor, shall be equipped with a malleable iron cam latch handle of standard Truscon design.

16 All ventilators Opening Out, and not easily accessible shall be equipped with a malleable iron cam latch handle and pole-hook ring.
(Truscon automatic chain operated latch may be substituted for cam-latch and pole hook at additional cost).

### *Structural Support*

17 All structural work for the support of steel windows shall be provided by another contractor.

### *Painting*

18 All window units shall be given a shop coat of protective paint before shipment.

### *Glazing*

19 Glass shall be held in place by Truscon copper-clad steel wire glazing clips.

20 Glass shall be bed and face puttied with Truscon metal window putty.

### *Erection*

21 Window units must be trued in all directions and set plumb in the masonry before glazing.

22 In setting windows, wooden wedges to hold frame in place must be located so as not to bulge or distort the unit.

23 The erection of windows shall be handled by the manufacturer of same.

24 After windows have been set in opening and properly built in, the joint between the window frames and masonry shall be carefully pointed up by the mason contractor.

# *Products Manufactured by Truscon*

*Steel Window Products*
- Double-Hung Windows
- Donovan Awning Type
- Silentaire Windows
- Pivoted Windows
- Utility Windows
- Continuous Windows
- Detention Windows
- Projected Windows
- Steel Casements
- Casement Screens
- Basement Windows
- Steel Frames
- Mechanical Operators
- Pressed Steel Lintels
- Coal Chutes

*Window Muffler*
- Silentaire
  - Mechanical
  - Non-Mechanical

*Steel Doors*
- Swing and Slide
- Bifold
- Canopy Type
- Overdoor
- Accordion Type
- Vertical Lift
- Morgan Door
- Vertical Lift-Swing
- Telescoping Canopy
- Original "Kanopy" Type
- Airplane Hangar

*Steel Buildings*
- Flat and Pitched Roof Types
- Sawtooth Types
- Ferroclad Walls (Insulated)
- Super-Service Stations
- Family Wintergardens

*Structural Steel*
- Trusses

*Floor Systems*
- Teegrid Bridge Floors
- Unigrid Floors
- Channelplate Construction
- Steel Paving Blocks
- Presto Floors
- Plategrid Gratings
- Floorgrid Reinforcing

*Steeldeck Roofs (Insulated)*
- Ferrodeck
- Ferrobord
- Ferroplate

*Steel Joists*
- Open Truss Joists
- Plate Girder Joists
- Nailer Joists
- Clerespan Trusses
- Accessories

*Metal Lath Products*
- A-Metal Laths and Hy-Ribs
- Herringbone Doublemesh
- Diamond Laths
- Self-Sentering and Trussit
- Stucco Steel and Strip-ite
- Metal Plasterbord
- Insulmesh
- Corner Beads and Cornerite
- Channels and Studs
- Mortar Boxes
- Metal Trim

*Reinforcing Steel*
- Rib Bars
- Kahn Trussed Bars
- Column Hooping
- Floretyles
- Locktyle
- Bank Vault Reinforcing
- Steel Inserts

*Road Reinforcing*
- Welded Steel Fabric
- Contraction Plates
- Expansion Joints
- Edge Protectors
- Curb Bars
- Road Forms
- Super Safety Guards
- Traffic Markers

*Steel Faced Insulation*
- Ferroclad Panels
- Thermoclad Containers
- Armorply

*Steel Poles*
- Weltrus Type
- H-Frames
- Floodlight Towers
- Pipe Line Supports
- Radio Towers
- Sub-Stations

*Pressed and Drawn Steel*
- Refrigerator Cabinets
- Automobile and Truck Frames
- Pressed Steel Parts
- Steel Liner Plates
- Steel Forms
- Safety Tread Steel
- Railroad Crossings
- Skid Platforms
- Foundry Flasks
- Beer Barrels
- Beer Cases
- Milk Bottle Crates
- Beverage Cases

*Laboratory Products*
- Waterproofings
- Technical Paints
- Floor Hardeners
- Cement Roofing Tile

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